

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Permit AQ1183MSS02

Preliminary – October 22, 2009

Revises Tables 1 and 3, and Conditions 6.2, 6.3, 8, 16, 32, 33 and 39 of

Minor Permit AQ1183MSS01

Rescinds Conditions 9 Minor Permit AQ1183MSS01

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ1183MSS02 to the Permittee listed below.

Permittee: Doyon Utilities, LLC
PO Box 74040
Fairbanks, AK 99707

Owner and Operator: Same as Permittee

Stationary Source: Fort Greely Real Estate (Privatized Emission Units)

Location: Latitude: 63° 58' N; Longitude: 145° 43' W

Physical Address: U.S. Army Garrison, Fort Greely, Alaska

Permit Contact: Kathleen Hook
khook@doyonutilities.com
(907) 455-1540

Project: Replace Backup Generators

This minor permit is issued under 18 AAC 50.508(6) to revise or rescind terms and conditions of a Title I permit under 18 AAC 50. This permit satisfies the obligation of the Permittee to obtain a minor permit under these provisions.

The Department authorizes the Permittee to operate under the terms and conditions of this permit, and as described in the original permit application and subsequent application supplements listed in Section 6, except as otherwise specified in this permit. The Permittee may operate under the provisions of this minor permit upon issuance.

John F. Kuterbach
Manager, Air Permits Program

Table of Contents

Section 1	Permit Administration.....	3
Section 2	Revisions to Minor Permit AQ1183MSS01	4
	Stationary Source Wide PSD Avoidance NOx Caps.....	4
	General Ambient Air Quality Requirements for Scenario A and Scenario B	5
	Emission Calculations.....	6
	Fee Requirements.....	8
Section 3	State Emission Standards.....	9
	Visible Emissions Standards.....	9
	Particulate Matter Emissions Standards.....	12
	Sulfur Compound Emissions Standards.....	14
Section 4	Federal Requirements	16
	Compression Ignition CI ICE Subject to NSPS Subpart IIII.....	16
	Emission Units/Stationary Sources Subject to Federal National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart A	18
	Emission Units Subject to NESHAPs Subpart ZZZZ.....	18
Section 5	Standard Conditions.....	19
Section 6	Permit Documentation	20

Section 1 Permit Administration

1. Minor Permit AQ1183MSS01 remains in effect except as revised by Minor Permit AQ1183MSS02.¹

¹ The Department issued Minor Permit AQ1183MSS01 on August 15, 2008. All references to Minor Permit AQ1183MSS01 regards this version, unless noted otherwise.

Section 2 Revisions to Minor Permit AQ1183MSS01

2. Table 1 of Minor Permit AQ1183MSS01 is replaced with the following Table 1 and table note.

Table 1 - Minor Permit Emission Unit Inventory ^a

Emission Unit No.	Equipment Type	Make	Model	Capacity
Boilers				
FGBF14	Boiler	English Tube	92-193A	57.9 MMBtu/hr
FGBF15	Boiler	English Tube	92-193A	57.9 MMBtu/hr
FGBF16	Boiler	Erie City Iron	Unknown	67.3 MMBtu/hr
Diesel Engines and Generators				
FGIC08	Genset	Enterprise	DSQ38 59019	1,765 hp
FGIC09	Genset	Enterprise	DSQ38 59020	1,765 hp
FGIC18	Genset	Caterpillar	C175-16	4,423 hp
FGIC19	Genset	Caterpillar	C175-16	4,423 hp
FGIC20	Genset	Caterpillar	C175-16	4,423 hp
FGIC21	Genset	Caterpillar	C175-16	4,423 hp
Pumps				
FGIC10	Pump	Mitsubishi	4D31-T	101 hp
FGIC11	Pump	Mitsubishi	4D31-T	101 hp
FGIC12	Engine	Clarke	JU4HUF40	105 hp
FGIC13	Pump (MOGAS)	Unknown	Unknown	100 hp

^a The Permittee is no longer authorized to operate Emission Units FGIC05 – FGIC07, as previously listed in Minor Permit AQ1183MSS01.

Stationary Source Wide PSD Avoidance NO_x Caps

3. Condition 6.2 of Minor Permit AQ1183MSS01 is replaced with Condition 4 below.
4. Prior to removal of Emission Units FGIC08 and FGIC09, limit the hours of operation of Emission Units FGIC08, FGIC09, and FGIC18 through FGIC21, as follows:
 - 4.1 For Emission Units FGIC08 and FGIC09, limit the total hours of operation to no greater than 3,200 hours, **combined**, per rolling 12-month period; and
 - 4.2 For Emission Units FGIC18 through FGIC21, limit the total hours of operation to no greater than 2,960 hours, **combined**, per rolling 12-month period.
5. Condition 6.3 of Minor Permit AQ1183MSS01 is replaced with Condition 6 below.
6. Upon removal of Emission Units FGIC08 and FGIC09, limit the total hours of operation of Emission Units FGIC18 through FGIC21 to no greater than 5,620 hours, **combined**, per rolling 12-month period.
7. Condition 8 of Minor Permit AQ1183MSS01 is replaced with Condition 8 below.

8. The Permittee shall accurately monitor, record and report the monthly and rolling 12-month hours of operation, for Emission Units FGIC08 through FGIC13 and FGIC18 through FGIC21, as follows:
 - 8.1 Equip *each* emission unit with either hour totalizers or another Department approved methodology to accurately monitor the monthly hours of operation.
 - 8.2 For *each* emission unit, maintain records of the monthly and the rolling 12-month hours of operation, per the requirements of Condition 27 of Minor Permit AQ1183MSS01.
 - 8.3 For *each* emission unit, report the monthly and the rolling 12-month hours of operation in the operating report required by Condition 29 of Minor Permit AQ1183MSS01.
 - 8.4 Prior to the removal of Emission Units FGIC08 and FGIC09, notify the Department in accordance with Condition 28 of Minor Permit AQ1183MSS01 if the limit in Condition 4.1 or 4.2 is exceeded.
 - 8.5 Following the removal of Emission Units FGIC08 and FGIC09, notify the Department in accordance with Condition 28 of Minor Permit AQ1183MSS01 if the limit in Condition 6 is exceeded.
 - 8.6 For Emission Units FGIC10 through FGIC12, monitor, record and report, the hours of operation, for *each* emission unit, on a daily and rolling 12-month basis.
 - 8.7 If the hours of operation on a rolling 12-month or rolling 24-hour basis, for Emission Units FGIC10 through FGIC12, exceed the limits in Condition 6.4 of Minor Permit AQ1183MSS01, report as a permit deviation per Condition 28 of Minor Permit AQ1183MSS01.
 - 8.8 If Emission Unit FGIC13's hours of operation, per rolling 12-month period, exceed the limit in Condition 6.5 of Minor Permit AQ1183MSS01, report as a permit deviation per Condition 28 of Minor Permit AQ1183MSS01.
9. Condition 9 of Minor Permit AQ1183MSS01, including subparts 9.1 and 9.2, is rescinded.

General Ambient Air Quality Requirements for Scenario A and Scenario B

10. Condition 16 of Minor Permit AQ1183MSS01 is replaced with Condition 11.
11. For both Scenario A and Scenario B, the Permittee shall:
 - 11.1 Protect the SO₂ ambient air quality standards and increments by limiting the maximum sulfur content of the fuel oil to the levels listed in Conditions 11.2 and 11.3.² Monitor, record, and report as follows:
 - a. obtain a statement or receipt from the fuel supplier certifying the maximum sulfur content of the fuel for each shipment of fuel delivered to the stationary

² The sulfur limits are also pertinent for permit applicability.

- source. If a certificate is not available from the supplier, analyze a representative sample of the fuel to determine the sulfur content using ASTM method D-129, D 4294, or an alternative method approved by the Department;
- b. keep a list of the fuel sulfur contents and amount of each shipment of fuel oil received at the stationary source during the reporting period; and
 - c. include the list with the operating report required under Condition 29 of Minor Permit AQ1183MSS01.
- 11.2 For Emission Units FGBF14 through FGBF16, and FGIC08 through FGIC13 – limit the maximum sulfur content to 0.12 percent, by weight.
- 11.3 For Emission Units FGIC18 through FGIC21 – limit the maximum sulfur content to 15 ppm, by weight.
- 11.4 Protect the annual average NO₂, SO₂ and PM-10 ambient air quality standards and increments by complying with Conditions 4 and 6, and with Conditions 6.1, 6.4 and 6.5 of Minor Permit AQ1183MSS01.

Emission Calculations

12. Condition 32 of Minor Permit AQ1183MSS01 is replaced with Condition 13 below.
13. If a revised emission factor submitted under Condition 10 or 11 of Minor Permit AQ1183MSS01 is 10 percent or greater than the emission factor it is replacing in Table 2, then the Permittee shall calculate the monthly and rolling 12-month stationary source wide NO_x emissions for all the fuel burning equipment contained in Table 1, using the methodologies contained in this section.
- 13.1 Calculate the stationary source wide NO_x emissions within 30 days of receiving Department approval of the revised emission factor.
 - 13.2 Maintain records of all the calculations and the results per Condition 27 of Minor Permit AQ1183MSS01.
 - 13.3 Report the stationary source wide monthly and rolling 12-month NO_x emissions to the Department per Condition 29 of Minor Permit AQ1183MSS01.
 - 13.4 The Permittee shall perform these calculations for a period of no less than 18 months from receipt of the Department approval for the emission factor that triggered the requirement, or until obtaining written Department approval that the calculations are no longer required.
14. Condition 33 of Minor Permit AQ1183MSS01 is replaced with Condition 15 below.
15. The Permittee shall use the emission factors in Table 2, or the revised emission factors submitted under Condition 10 and/or 11 of Minor Permit AQ1183MSS01, as follows:
- 15.1 The Department approved emission factors will replace the emission factor contained in Table 2 for the emission unit(s) tested or covered by the test. The updated emission factors shall be used for calculating all emissions subsequent to the

date of approval. The current Table 2 emission factors shall be used for calculating all previous emissions.

- 15.2 If a single fuel flow meter is being used for Emission Units FGBF14 through FGBF16 per Condition 7.1b of Minor Permit AQ1183MSS01, then the Permittee shall use the worst case emission factor from all three Emission Units FGBF14 through FGBF16 for all emissions calculations for Emission Units FGBF14 through FGBF16.
16. Table 3 of Minor Permit AQ1183MSS01 is replaced with the following Table 2.

Table 2 – Department Approved Emission Factors

Emission Unit ID	Emission Factor for NO _x	Source	Emission Factor for SO ₂	Source	Emission Factor for CO	Source	Emission Factor for PM ₁₀	Source
FGBF14	20lb /1000 gal	AP 42	135(%S) /1000 gal	Mass Balance ^a	5.0 lb/ 1000 gal	AP 42	2.38lb/1000 gal	AP 42
FGBF15	20lb /1000 gal	AP 42	135(%S) /1000 gal	Mass Balance ^a	5.0 lb/ 1000 gal	AP 42	2.38lb/1000 gal	AP 42
FGBF16	20lb /1000 gal	AP 42	135(%S) /1000 gal	Mass Balance ^a	5.0 lb/ 1000 gal	AP 42	2.38lb/1000 gal	AP 42
FGIC08	42.36 lb/hr	AP 42	135(%S) /1000 gal	Mass Balance ^a	9.71 lb/hr	AP42	1.236 lb/hr	AP 42
FGIC09	42.36 lb/hr	AP 42	135(%S) /1000 gal	Mass Balance ^a	9.71 lb/hr	AP42	1.236 lb/hr	AP 42
FGIC10	3.131 lb/hr	AP 42	135(%S) /1000 gal	Mass Balance ^a	0.675 lb/hr	AP42	0.222 lb/hr	AP 42
FGIC11	3.131 lb/hr	AP 42	135(%S) /1000 gal	Mass Balance ^a	0.675 lb/hr	AP42	0.222 lb/hr	AP 42
FGIC12	1.68 lb/hr	Vendor	135(%S) /1000 gal	Mass Balance ^a	0.701 lb/hr	AP42	0.021 lb/hr	Vendor
FGIC13	1 lb/hr	AP 42	0.059 lb/ hr	AP 42	43.9 lb/hr	AP 42	0.072 lb/hr	AP 42
FGIC18	60.09 lb/hr	Vendor ^b	135(%S)/1000 gal	Mass Balance ^a	13.00 lb/hr	Vendor ²	0.60 lb/hr	Vendor ^b
FGIC19	60.09 lb/hr	Vendor ^b	135(%S)/1000 gal	Mass Balance ^a	13.00 lb/hr	Vendor ²	0.60 lb/hr	Vendor ^b
FGIC20	60.09 lb/hr	Vendor ^b	135(%S)/1000 gal	Mass Balance ^a	13.00 lb/hr	Vendor ²	0.60 lb/hr	Vendor ^b
FGIC21	60.09 lb/hr	Vendor ^b	135(%S)/1000 gal	Mass Balance ^a	13.00 lb/hr	Vendor ²	0.60 lb/hr	Vendor ^b

Table Notes:

- SO₂ Mass Balance: Assumes 100% conversion to SO₂. Typical fuel density is 0.81 kg/l (6.75 lb/gal) per vendor fuel analyses provided to Fort Greely. $(6.75\text{lb/gal})(2)(\%S/100)(1000) = 135 (\%S) \text{ lb SO}_2/1000 \text{ gal}$
- Emission Factors are vendor "Not to Exceed" values at the respective worst-case load for each pollutant.

Fee Requirements

17. Condition 39 of Minor Permit AQ1183MSS01 is replaced with Condition 18 below.
18. **Assessable Emissions.** The Permittee shall pay to the department an annual emission fee for permitted activities based on the stationary source's assessable emissions as determined by the department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410(b). The Department will assess fees per ton of each air pollutant that the entire stationary source emits or has the potential to emit in quantities greater than 10 tons per year.
 - 18.1 This operating permit is associated with Permit AQ0238TVP01 Revision 4 Fort Greely Real Estate – Garrison for purposes of determining the stationary source's assessable emissions. The owner/operators of these permits shall jointly determine assessable emissions for the stationary source based on this condition. Each Permittee shall pay any and all fees associated with this permit's activities.
 - 18.2 The quantity for which fees will be assessed is the lesser of
 - a. assessable potential to emit of 294.3 TPY for the activities authorized under this permit; other emission units within this stationary source are operating and will pay assessable emission fees under Air Quality Operating Permit No. AQ0238TVP01 Revision 4; or
 - b. projected annual rate of emissions for activities operating under this permit that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the department, when demonstrated by
 - (i) an enforceable test method described in 18 AAC 50.220;
 - (ii) material balance calculations;
 - (iii) emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - (iv) other methods and calculations approved by the Department.

Section 3 State Emission Standards

Visible Emissions Standards

19. **Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Emission Units FGIC18 through FGIC21 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes. Monitor, record and report in accordance with Conditions 20 through 22.
20. **Visible Emissions Monitoring.** The Permittee shall observe the exhaust of Emission Units FGIC18 through FGIC21 for visible emissions using either the Method 9 Plan under Condition 20.1 or the Smoke/No-Smoke Plan under Condition 20.2. The Permittee may change visible-emissions plans for an emission unit at any time unless prohibited from doing so by Condition 20.3. The Permittee may for each unit elect to continue the visible emission monitoring schedule in effect from the previous permit at the time a renewed permit is issued, if applicable.
 - 20.1 **Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.
 - a. First Method 9 Observation. For Emission Units FGIC18 through FGIC21, observe exhaust for 18 minutes within six months after the issue date of this permit. For any unit, observe exhaust for 18 minutes within 14 calendar days after changing from the Smoke/No-Smoke Plan of Condition 20.2. For any unit replaced during the term of this permit, observe exhaust for 18 minutes within 30 days of startup.
 - b. Monthly Method 9 Observations. After the first Method 9 observation, perform 18-minute observations at least once in each calendar month that an emission unit operates.
 - c. Semiannual Method 9 Observations. After observing emissions for three consecutive operating months under Condition 20.1b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, perform 18-minute observations at least semiannually.

Semiannual observations must be taken between four and seven months after the previous set of observations.
 - d. Annual Method 9 Observations. After at least two semiannual 18-minute observations, unless a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, perform 18-minute observations at least annually.

Annual observations must be taken between 10 and 13 months after the previous observations.

- e. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that emission unit to at least monthly intervals, until the criteria in Condition 20.1c for semiannual monitoring are met.

20.2 Smoke/No Smoke Plan. Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

- a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that an emission unit operates.
- b. Reduced Monitoring Frequency. After the emission unit has been observed on 30 consecutive operating days, if the emission unit operated without visible smoke in the exhaust for those 30 days, then observe emissions at least once in every calendar month that an emission unit operates.
- c. Smoke Observed. If smoke is observed, either begin the Method 9 Plan of Condition 20.1 or perform the corrective action required under Condition 20.3.

20.3 Corrective Actions Based on Smoke/No Smoke Observations. If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of Condition 20.2, then the Permittee shall either follow the Method 9 plan of Condition 20.1 or

- a. initiate actions to eliminate smoke from the emission unit within 24 hours of the observation;
- b. keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke; and
- c. after completing the actions required under Condition 20.3a,
 - (i) take Smoke/No Smoke observations in accordance with Condition 20.2.
 - (A) at least once per day for the next seven operating days and until the initial 30 day observation period is completed; and
 - (B) continue as described in Condition 20.2b; or
 - (ii) if the actions taken under Condition 20.3a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of Condition 20.3c(i)(A), then observe the exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under Condition 20.2a.

21. **Visible Emissions Recordkeeping.** The Permittee shall keep records as follows:

21.1 When using the Method 9 Plan of Condition 20.1,

- a. the observer shall record
 - (i) the name of the stationary source, emission unit and location, emission unit type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet in Attachment 1 of Minor Permit AQ1183MSS01;
 - (ii) the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;
 - (iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;
 - (iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation record in Attachment 1 of Minor Permit AQ1183MSS01, and
 - (v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.
- b. To determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet.
- c. Calculate and record the highest 18-consecutive-minute averages observed.

21.2 If using the Smoke/No Smoke Plan of Condition 20.2, record the following information in a written log for each observation and submit copies of the recorded information upon request of the Department:

- a. the date and time of the observation;
- b. from Table 1, the ID of the emission unit observed;
- c. whether visible emissions are present or absent in the exhaust;
- d. a description of the background to the exhaust during the observation;
- e. if the emission unit starts operation on the day of the observation, the startup time of the emission unit;

- f. name and title of the person making the observation; and
- g. operating rate (load or fuel consumption rate).

22. **Visible Emissions Reporting.** The Permittee shall report visible emissions as follows:

22.1 Include in each operating report submitted under the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, include for the period covered by the report:

- a. which visible-emissions plan of Condition 20 was used for each emission unit; if more than one plan was used, give the time periods covered by each plan;
- b. for each emission unit under the Method 9 Plan,
 - (i) copies of the observation results (i.e. opacity observations) for each emission unit that used the Method 9 Plan, except for the observations the Permittee has already supplied to the Department; and
 - (ii) a summary to include:
 - (A) number of days observations were made;
 - (B) highest six-minute average observed; and
 - (C) dates when one or more observed six-minute averages were greater than 20 percent;
- c. for each emission unit under the Smoke/No Smoke Plan, the number of days that Smoke/No Smoke observations were made and which days, if any, that smoke was observed; and
- d. a summary of any monitoring or recordkeeping required under Conditions 20 and 21 that was not done;
- e. Report under the Excess Emissions and Permit Deviation Reports required under the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50:
 - (i) the results of Method 9 observations that exceed an average of 20 percent opacity for any six-minute period; and
 - (ii) if any monitoring under Condition 20 was not performed when required, report within three days of the date the monitoring was required.

Particulate Matter Emissions Standards

23. **Industrial Process and Fuel-Burning Equipment Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from Emission Units FGIC18 through FGIC21 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours. Monitor, record and report in accordance with Conditions 24 through 26.

24. **Particulate Matter Monitoring for Diesel Engines.** The Permittee shall conduct source tests on Emission Units FGIC18 through FGIC21, to determine the concentration of particulate matter (PM) in the exhaust of an emission unit in accordance with this Condition 24.
- 24.1 Except as provided in Condition 24.4 within six months of exceeding the criteria of Conditions 24.2a or 24.2b, either
- a. conduct a PM source test according to requirements set out in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50; or
 - b. make repairs so that emissions no longer exceed the criteria of Condition 24.2; to show that emissions are below those criteria, observe emissions as described in Condition 20.1 under load conditions comparable to those when the criteria were exceeded.
- 24.2 Conduct the PM test or make repairs according to Condition 24.1 if
- a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or
 - b. for an emission unit with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing.
- 24.3 During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the highest average 6-minute opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.
- 24.4 The automatic PM source test requirement in Conditions 24.1 and 24.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.
25. **Particulate Matter Recordkeeping for Diesel Engines.** Within 180 calendar days after the effective date of this permit, the Permittee shall record the exhaust stack diameter(s) of Emission Units FGIC18 through FGIC21. Report the stack diameter(s) in the next operating report submitted under the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50.
26. **Particulate Matter Reporting for Diesel Engines.** The Permittee shall report as follows:
- 26.1 Report under the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50
- a. the results of any PM source test that exceeds the PM emissions limit; or

- b. if one of the criteria of Condition 24.2 was exceeded and the Permittee did not comply with either Condition 24.1a or 24.1b, this must be reported by the day following the day compliance with Condition 24.1 was required;
- 26.2 Report observations in excess of the threshold of Condition 24.2b within 30 days of the end of the month in which the observations occur;
- 26.3 In each operating report submitted under the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, include for the period covered by the report:
 - a. the dates, EU ID(s), and results when an observed 18-minute average was greater than an applicable threshold in Condition 24.2;
 - b. a summary of the results of any PM testing under Condition 24; and
 - c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of Condition 24.2, if they were not already submitted.

Sulfur Compound Emissions Standards

27. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from Emission Units FGIC18 through FGIC21 to exceed 500 ppm averaged over three hours.
- 27.1 The Permittee shall do one of the following for each shipment of fuel:
- a. If the fuel grade requires a sulfur content less than 0.5 percent by weight, keep receipts that specify fuel grade and amount; or
 - b. If the fuel grade does not require a sulfur content less than 0.5 percent by weight, keep receipts that specify fuel grade and amount and
 - (i) test the fuel for sulfur content; or
 - (ii) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent.
- 27.2 Fuel testing under Condition 27.1 must follow an appropriate method listed in 18 AAC 50.035(b)-(c) and 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).
- 27.3 If a load of fuel contains greater than 0.75 percent sulfur by weight, the Permittee shall calculate SO₂ emissions in ppm using either the Material Balance Calculation section of the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).

27.4 The Permittee shall report as follows:

- a. If SO₂ emissions calculated under Condition 27.3 exceed 500 ppm, the Permittee shall report in the Excess Emissions and Permit Deviation Reports required under the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50. When reporting under this condition, include the calculation under the Material Balance Calculation section of the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50.
- b. The Permittee shall include in the operating report submitted under the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50:
 - (i) a list of the fuel grades received at the stationary source during the reporting period;
 - (ii) for any grade with a maximum fuel sulfur greater than 0.5 percent sulfur, the fuel sulfur of each shipment; and
 - (iii) for fuel with a sulfur content greater than 0.75 percent, the calculated SO₂ emissions in ppm.

Section 4 Federal Requirements³

Compression Ignition CI ICE Subject to NSPS Subpart IIII

28. **NSPS Subpart IIII Requirements.** For Emission Units FGIC18 through FGIC21, the Permittee shall comply with any applicable requirement for stationary compression ignition (CI) internal combustion engine (ICE) whose construction⁴, modification⁵, or reconstruction⁶ commences after July 11, 2005.

- 28.1 Operate and maintain the stationary CI ICE and control device according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer.

[18 AAC 50.040(j), 7/25/08; 18 AAC 50.326(j), 12/1/04]

[40 C.F.R. 71.6(a)(1), 7/2/07]

[40 C.F.R. 60.4200(a), 60.4206, & 60.4211(a), 7/11/06]

- 28.2 Comply with the applicable provisions of Subpart A as specified in Table 8 to Subpart IIII.

[18 AAC 50.040(j), 7/25/08; 18 AAC 50.326(j), 12/1/04]

[40 C.F.R. 71.6(a)(1)]

[40 C.F.R. 60.4218 & Table 8, 7/11/06]

- 28.3 Notification. For Emission Units FGIC18 through FGIC21 submit an initial notification as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50. The notification shall include the following information:

- a. Name and address of the owner or operator;
- b. The address of the affected source;
- c. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
- d. Emission control equipment; and

³ The U.S. Environmental Protection Agency (EPA) is responsible for enforcing the New Source Performance Standards (NSPS) and the National Emission Standards for Hazardous Air Pollutants (NEHSAP) requirements within the State of Alaska. However, the NSPS and NESHAP provisions must be included in the Title V permits since they are applicable federal requirements. The Department is therefore providing for informational purposes only, the applicable NSPS and NESHAP requirements for Emission Units FGIC18 through FGIC21. In the case of inconsistency between this minor permit and federal rule, federal rule will prevail. These provisions are listed here for purposes of incorporating all applicable requirements into the Title V permit under the administrative amendment process in 18 AAC 50.326(c)(2). The provisions may be amended, as warranted, in the Title V permit without revising the underlying minor permit.

⁴ For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

⁵ As defined in 18 AAC 50.990(59).

⁶ As defined in 18 AAC 50.990(88).

- e. Fuel used.

[40 C.F.R. 60.4214(a), 7/11/06]

28.4 Performance Tests. The Permittee shall conduct performance tests in accordance with 40 C.F.R. 60.4212 for Emission Units FGIC18 through FGIC21.

[40 C.F.R. 60.4212 & 60.4213, 7/11/06]

29. **NSPS Subpart IIII Fuel Requirements.** The Permittee shall comply with the following:

29.1 Prior to October 1, 2010, use diesel fuel that meets the requirements of 40 CFR 80.510(a) for Emission Units FGIC18 through FGIC21.

[40 C.F.R. 60.4207(a), 7/11/06]

29.2 Beginning October 1, 2010, use diesel fuel that meets the requirements of 40 CFR 80.510(b) for Emission Units FGIC18 through FGIC21.

[40 C.F.R. 60.4207(b), 7/11/06]

30. **NSPS Subpart IIII Emission Standards.** For Emission Units FGIC18 through FGIC21, the Permittee shall certify to the certification emission standards for new marine CI engines in 40 C.F.R. 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

[40 C.F.R. 60.4204(b) & 4201(d), Subpart IIII, 7/11/06]

[40 C.F.R. 94.8(a)(1), 12/5/07]

31. **NSPS Subpart IIII Monitoring and Recordkeeping.** The Permittee shall meet the monitoring requirements, as follows:

[40 C.F.R. 60.4205(b), 60.4204(a)(1&2), & Table 2, Subpart IIII, 7/11/06]

[40 C.F.R. 89.112, 7/13/05; 40 C.F.R. 89.113, Subpart B, 10/23/98]

[40 C.F.R. 1039.104, 105, 107, 115, Subpart B, 9/18/07]

31.1 Keep records of the information in Conditions 31.1a through 31.1d:

- a. All notifications required in Condition 28.3 and all documentation supporting any notification;
- b. Maintenance conducted on the engine;
- c. If the stationary CI ICE is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards; and
- d. If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

[40 C.F.R. 60.4211(b), Subpart IIII, 7/11/06]

32. **NSPS Subpart III Reporting.** The Permittee shall report in the operating report described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50 the following:

- 32.1 upon initial startup, provide a copy of the records required in Conditions 31.1c or 31.1d in the next operating report.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

Emission Units/Stationary Sources Subject to Federal National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart A

33. **NESHAPs Subpart A.** The Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A in accordance with the provisions for applicability of Subpart A in Subpart ZZZZ (Table 8) as set out by Condition 34.

[18 AAC 50.040(j)(4), 7/25/08]
[40 C.F.R. 63, Subpart A, 7/16/07]

Emission Units Subject to NESHAPs Subpart ZZZZ

34. **NESHAPs Subpart ZZZZ Requirements.** The provisions of 40 C.F.R. 63 Subpart ZZZZ is applicable to Emission Units FGIC18 through FGIC21 as follows:

- 34.1 An affected source that is anew or reconstructed stationary RICE located at an area source must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 C.F.R. 60 Subpart IIII for compression ignition engines. No further requirements apply for such engines under this part.

[18 AAC 50.040(j), 12/3/05; 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 63, Subpart ZZZZ, 7/01/08]

Section 5 *Standard Conditions*

35. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50 and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for
 - 35.1 An enforcement action; or
 - 35.2 Permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.
36. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.
37. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.
38. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
39. The permit does not convey any property rights of any sort, nor any exclusive privilege.

Section 6 *Permit Documentation*

May 12, 2009	Minor Permit application for the minor permit revision.
September 21, 2009	EMail from DU's consultant (Courtney Kimball – Hoefler Consulting Group) requesting alternative language regarding the permanent phase trigger.
September 28, 2009	EMail from Kathleen Hook (DU) requesting a revised operational limit (5,620 hr/yr) for Emission Units FGIC18 – FGIC21.
October 1, 2009	EMail from Kathleen Hook (DU) transmitting updated versions of pages C-1 and C-2 of DU's application. The updated versions contain the revised operational limit for Emission Units FGIC18 – FGIC21.